

Rock Inlet Program in Jackson County

An alternative tile intake, or rock inlet program has recently been developed in Jackson County Minnesota. Administered by the Jackson Soil and Water Conservation District (SWCD), the tile intake program has been very popular with landowners looking at other options for open surface intakes. This program is also taking place in the Heron Lake Watershed District (HLWD) spanning Nobles, Cottonwood, and Murray Counties. Currently, landowners are offered 75% cost-share on the replacement of their open tile intakes.

Open tile intakes are removed and replaced with either a muck pipe and filter sock or perforated tile that remains underground. The muck pipe used should have at least six 5/8 inch holes per foot. The excavated trench is then filled with rock aggregate up to 7/8 inch in diameter mounded about one foot above grade. Usually, pea rock is recommended. A one-foot deep bed of gravel is first spread into the trench for the intake pipe to lay on. The intake pipe will be installed with a slight downward grade to allow water to easily empty into the existing tile line. The length of the new intake is usually about 15 feet long, but will depend on the drainage area. Monitoring, done by the Carver County SWCD has documented water quality benefits from the rock inlets. The idea behind this practice is to allow water to be filtered by the gravel before reaching the tile. This practice reduces sediments and the amount of phosphorus that ends up in our lakes and streams. These intakes can be driven over in the field without damage to the structure, unlike a conventional open tile intake. Rock inlets can withstand planting and light tillage, such as a single disking, but heavier tillage or plowing is not recommended.

Periodic maintenance may be needed depending on tillage practices and drainage area. This maintenance will usually consist of removing the top layer or mounded gravel from the structure and replacing it with a fresh layer of gravel.

Currently, we are tracking the intakes that are being replaced to determine the best way to design these intakes for soil types found in Jackson County. We are giving landowners the flexibility of installing these intakes with a perforated tile or a muck pipe and filter sock. 177 intakes have been signed up under this program in Jackson County. We are pleased with the amount of cooperation this program has received from landowners in this county.

CAUTION: It should be noted that rock inlets can only be used in "prior converted" (PC) cropland. Installing them in "farmed wetlands" (FW) will cause the FW to be reclassified as a "converted wetland" (CW).



